Identifying potential countries and estimating reach and impact through rice fortification

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Country selection: three-step approach

Needs assessment (quantitative)
- Prevalence of anaemia in women >30%
- And/or
- Prevalence of NTDs >6/10,000 births

Opportunity assessment (quantitative)
- Per capita consumption of rice ≥ 75g per day
- Fortifiability (>75% industrially milled)
- Additional potential to benefit (<50% fortified)

Scope assessment (qualitative)
- Optimal fortification design:
  - Legislation
  - Standards
  - Enabling environment
  - Others

Impact assessment

Source: Reducing the Burden of Anemia and Neural Tube Defects in Low- and Middle-Income Countries: An Analysis to Identify Countries with an Immediate Potential to Benefit from Large-Scale Mandatory Fortification of Wheat Flour and Rice. Nutrients 2021.
Impact assessment: Estimations for reach, and health and economic benefits

Reach assessment

Step 1: Total availability of rice (considering production & trade landscape)
Step 2: Total fortifiable rice with potential for fortification (industrially milled rice, currently not being fortified)
Step 3: Assessment of overall consumption of fortified rice (based on per capita consumption)
Step 4: Assessment of annual reach at scale

Health, economic benefits assessment

Step 1: Anaemia case years among women averted (based on existing prevalence; effect size for fortification; severity of anemia)
Step 2: NTD cases averted (based on level of folic acid in standards, pre- and post-fortification prevalence of NTDs; types of NTDs)
Step 3: DALYs averted
Step 4: DALYs monetized
Estimated annual health and economic benefits from nine identified countries

- **1.9 Billion** people reached
- **55.4 Million** cases of anaemia in WRA averted
- **36,000** cases of NTDs averted
- **32,000** child deaths averted
- **3.9 Million** DALYs averted
- **USD $27 Billion** saved

Countries with potential to benefit from rice fortification programs (n=9)
Source: Reducing the Burden of Anemia and Neural Tube Defects in Low- and Middle-Income Countries: An Analysis to Identify Countries with an Immediate Potential to Benefit from Large-Scale Mandatory Fortification of Wheat Flour and Rice. Nutrients 2021

Additional countries with potential to benefit identified through separate assessments (n=17)
Sources: The Unfinished Agenda for Food Fortification in Low- and Middle-Income Countries: Quantifying Progress, Gaps and Potential Opportunities. Nutrients 2020.; Better Nutrition for 147 Million People: Rice Fortification Opportunities in the African Region, FFI Assessment
THANK YOU!

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